



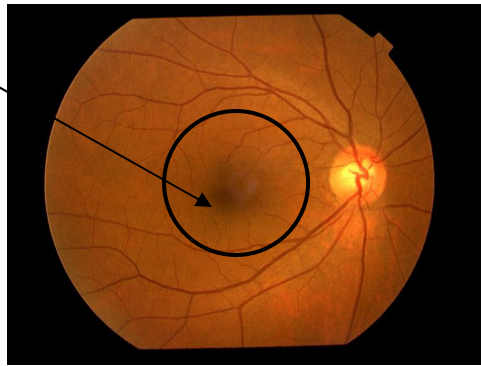
## Information Sheet

# Macular Hole: Diagnosis and Treatment

### The Macula

The macula is a small area in the central part of the retina. It contains large number of light-sensitive nerve cells hence allows us to see fine details clearly and perform activities such as reading and watching television. Without a healthy macula, we simply will not be able to see clearly; the central vision may be affected by blurriness, dark areas or image distortion.

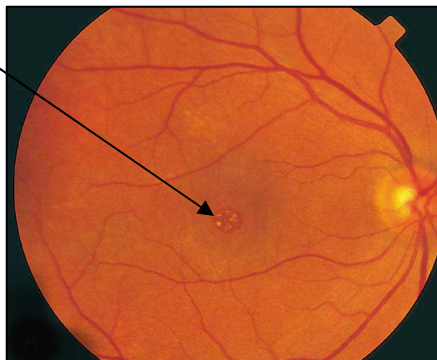
#### Normal macula



### What is a macular hole and how does it develop?

A macular hole is an abnormal opening that develops in the macula over weeks to months.

#### Macular hole



The vitreous gel is a jelly-like substance that fills the center of your eye and lies in front of the macula, where it is firmly attached. As you age, the gel degenerates and may stretch the macula. Overtime, a macular hole develops due to traction exerted by the gel.

Other causes of macular hole include high degree of near-sightedness, severe trauma to the injury, and long-standing swelling of the macula due to, e.g., diabetes.

## **What are the symptoms of a macular hole?**

Patients may initially experience blurriness in their central vision. They may also notice distorted or wavy vision. Over time, a central blind spot may develop. The patient will then have difficulty reading or performing tasks that require seeing detail.

## **How is a macular hole diagnosed?**

Your eye doctor will perform a complete eye examination including testing your vision and examining the inside of your eye with special instruments. Your eye doctor may also take photographs and perform an optical coherence tomography (OCT) scan of the back of your eye.

## **How is a macular hole treated?**

A surgical procedure called vitrectomy is used to remove the vitreous gel and treat the macular hole. The eye surgeon uses microsurgical instruments to cut the vitreous gel that is stretching the macula. A special gas bubble is then used to fill the inside of the eye to help flatten and close the macular hole. The patient must maintain a face-down position for one to two weeks to ensure the gas bubble presses against the macula to seal the hole. The bubble will slowly be reabsorbed. The success of the surgery often depends on how well the face-down positioning is maintained.

After the surgery, it is important to not travel on an airplane or to high altitudes until the bubble has been absorbed to a large extent. Usually this takes about 2 months. Otherwise, the bubble may enlarge and the eye pressure may rise to dangerous levels on the plane.

One can expect the vision to slowly regain, although the outcome will depend on how long the hole had been present prior to the surgery and on the size of the hole.

## **What are the risks of the surgery?**

The most common risk is the accelerated formation of a cataract. Other risks include bleeding, infection, retinal detachment, failure of hole closure, and poor vision.

## **How successful is the surgery?**

Discuss vision recovery with your doctor before your surgery. Vision improvement varies from patient to patient. Patients who have small macular holes for shorter duration have a better chance of visual recovery. Generally speaking, there is improvement in the vision in 50 – 70% of patient.